### PROCEEDINGS

OF THE

# BIOLOGICAL SOCIETY OF WASHINGTON

### DESCRIPTIONS OF TWO NEW MOLE RATS.

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Among the Old World rodents in the United States National Museum are two forms of *Spalax*, which I am unable to identify with any of the species recently characterized by Nehring and Satunin. One is from northern Dobrudscha, the other from Beyrout, Syria. They may be described as follows:

#### Spalax dolbrogeæ, sp. nov.

Type.—Adult male (skin and skull), No. 122,109, United States National Museum. Collected at Malcociu, Dobrudscha, Rumania, March 20, 1903. Received from Wilhelm Schlüter of Halle, a. S., Germany.

Characters.—A medium sized species nearly as large as Spalax microphthalmus, which it resembles in the form of the molar teeth, but from which it differs conspicuously in the much larger parietal bones.

Color.—Back, sides, and posterior half of head ochraceous-buff, slightly paler than that of Ridgway, the fur everywhere slate-gray beneath surface. Underparts and legs slate-gray, the color of sides extending as a distinct wash across middle of body. Face, cheeks, and region about mouth silvery drab-gray, the two lines of bristle-like hairs extending back from muzzle whitish in rather marked contrast.

Skull.—In general form the skull rather closely resembles that of Spalax microphthalmus as figured by Nehring, but the lambdoid ridge is almost straight, and each parietal bone is nearly as broad as long, and in size fully equal to the two together in the skull of the larger animal.

Anteriorly the two bones form a single point, and the latero-anterior border is continued backward almost to lambdoid crest, so that the outline of the bone is very nearly a right triangle. Sagittal crest well developed. Anterior margin of frontal straight.

Teeth.—The teeth agree with those of Spalax microphthalmus, as described by Nehring\*, except that each of the first and second upper molars has an enamel island in the anterior loop, making the pattern an exact reversal of that in the first and second lower molars of Spalax hungaricus.† In all of the teeth the pattern is essentially alike, and consists of a single narrow reentrant fold on each side. The inner reentrant is placed a little in advance of the outer, and is curved forward, while the outer curves back. In the maxillary teeth the folds are all open, but in the lower jaw those of the inner side are closed. The anterior faces of the incisors both above and below are finely roughened by minute longitudinal wrinkles, but there are no distinct grooves.

Measurements.—Head and body, 230; hind foot 29 (25); skull, greatest length, 52; basal length, 45; basilar length, 42; occipito-nasal length (from inion), 41; palatal length, 26; diastema, 19; length of nasals, 19; breadth of both nasals together anteriorly, 7; breath of both nasals together posteriorly, 2.6; greatest breadth of rostrum, 11.4; zygomatic breadth, 38; mastoid breadth, 26; least interorbital breadth, 6; palatal breadth between middle molars, 2; depth at middle of palate, 18.4; least depth of rostrum behind incisors, 7; mandible from condyle, 31; mandible, from root of incisor, 32; depth of mandible through coronoid process, 18.8; upper molars, alveoli, 7.6; upper molars, crowns, 6.6; width of second upper molar (crown), 2.8; lower molars, alveoli, 7; lower molars, crowns, 6.6; width of upper incisor at alveolus, 3; width of lower incisor at alveolus, 3.4.

Specimens examined.—One, the type.

Remarks.—This is probably the same animal as the Rumanian Spalax hungaricus recorded by Matschie, in 1901.‡ It is readily distinguishable from the Hungarian species, however, by its much larger size and by the presence of an inner reentrant enamel fold in the posterior molar both above and below. Spalax dolbrageæ is apparently more closely related to S. microphthalmus.

# Spalax berytensis, sp. nov.

Type.—Adult female (skin and skull), No. \( \frac{138989}{388989} \), United States National Museum. Collected at Beyrout, Syria, April, 1878, by W. T. Van Dyck.

<sup>\*</sup>Sitz.-Ber. Gesellsch. naturforsch. Freunde zu Berlin, 1897, p. 165.

<sup>†</sup> In the posterior loop of the left middle lower molar there is a very minute enamel island whose presence may be abnormal.

<sup>‡</sup>Sitz.-Ber. Gesellsch. naturforsch. Freunde zu Berlin, 1901, p. 237. Prundu, Rumania.

Characters.—A medium sized species, not as large as Spalax dolbrogew. Face of incisors without distinct grooves. Enamel pattern essentially as in Spalax kirgisorum; posterior upper molar with no reentrant enamel fold on inner side, posterior lower molar with a deep fold on each side. Skull broad and robust, without special elongation of rostrum.

Color.—In color the type resembles that of Spalax dolbrogew so closely as to require no special description. In two half grown young the mouse-gray of the muzzle is extended back over most of head, while in an old, much abraded male the light tips of the hairs are so much worn away that the whole animal is a dirty plumbeous brown.

Skull.—The skull of an old male with much worn teeth rather closely resembles that of Spalax dolbrogeæ, but is not as large. The more noticeable details of form in which it differs from the Dobrudschan animal are as follows: The rostrum is not distinctly swollen at roots of incisors; the anterior zygomatic roots flare less abruptly; the posterior margin of antorbital foramen is extended further backward, so that the foramen appears larger when skull is viewed from above; the anterior outline of the frontals is conspicuously angular-emarginate; the parietal is rhomboid, its length under lambdoid crest nearly double that of anterior margin; the basioccipital is narrower in proportion to its length; the tubular portion of the audital bulla is better developed. In the type the same characters are apparent, except that the interparietal is wider along anterior suture.

Teeth.—Enamel pattern of molars similar to that of Spalax kirgisorum as figured and described by Nehring,\* but with angles less sharp-pointed. First upper molar with well developed reentrant fold on inner side and two rather deeper folds on the outer side, the inner and the anterior outer almost meeting. Second upper molar with a deep fold on each side and a large enamel island opposite point of inner fold. Third upper molar entire on inner side, cut on outer side by two reentrant folds, of which the anterior is minute and inconspicious, the posterior deep and provided with a short posterior and long anterior curved off-shoot, the two off-shoots together forming a crescent parallel with inner edge of tooth: Each lower molar has a single deep reentrant fold on outer side. The first has two folds on inner side, the outer abruptly bent forward, the posterior slightly curved backward. The second has one reentrant angle on inner side. The third is provided with a deep anterior and a minute posterior fold. A large enamel island lies in posterior loop of second lower molar. Anterior faces of incisors finely roughened by minute. irregular, longitudinal folds. They show no trace of definite grooves, but the folds tend to form barely perceptible longitudinal ridges, three or four in number.

Measurements.—External measurements of type (from skin): Head and body, 130; hind foot, 24 (21). External measurements of old male from type locality: Head and body, 190; hind foot, 28 (24).

<sup>\*</sup>Sitz.-Ber. Gesellsch. naturforsch. Freunde zu Berlin, 1897, p. 177, fig. 4 (p. 175).

Cranial measurements of type: Greatest length, — (49\*); basal length, — (44.4); basilar length, — (40.4); occipito-nasal length (from inion), 30.4 (39); palatal length. 22 (29.4); diastema, 12 (17); length of nasals, 15 (20); breadth of both nasals together anteriorly, 5.2 (6.8); breadth of both nasals together posteriorly, 1.8 (2.8); greatest breadth of rostrum, 7.4 (10); zygomatic breadth, 27.2 (35); mastoid breadth, 22 (26); least interorbital breadth, 7 (6.4); palatal breadth between middle molars, 1.8 (2.4); depth at middle of palate, 13.4 (18.8); least depth of rostrum behind incisors, 5 (7); mandible from condyle, 24.8 (31); mandible from root of incisor, 24.6 (30); depth of mandible through coronoid process, 12.8 (17.6); upper molars, alveoli, 7.8 (8); upper molars, crowns, 8 (7); width of second upper molar (crown), 2.2 (2.8); lower molars, alveoli, 7.6 (7); lower molars, crowns, 6.4 (7); width of upper incisor at alveolus, 1.8 (2.6); width of lower incisor at alveolus, 1.8 (2.6).

Specimens examined .- Four, all from the vicinity of Beyrout.

Remarks.—In dental characters this species appears to be much like Spalax kirgisorum, an animal from which it differs very conspicuously in the large size and robust form of the skull. From its near geographic allies, Spalax ehrenbergi and Spalax intermedius it is also readily distinguishable; from the former by the absence of a reentrant fold on the inner side of the third upper molar and by the presence of only one fold on inner side of middle lower tooth; from the latter by the longer parietals (7 mm. instead of 5 mm. along sagittal crest), and by the absence of distinct grooves on the face of the incisor teeth.

<sup>\*</sup> Measurements in parenthesis are those of an adult male (much older than the type) from the same locality (No.  $\frac{36.568}{138.08}$ ).